

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P334817

Luminaire Tested: **S124IP-S810U935-4F0-1E-UDD-4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P334817
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124IP-S810U935-4F0-1E-UDD-4
Description: DEFINE 4 INDIRECT LED LUMINAIRE, BATWING OPTIC
PENDANT MOUNT, 810 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

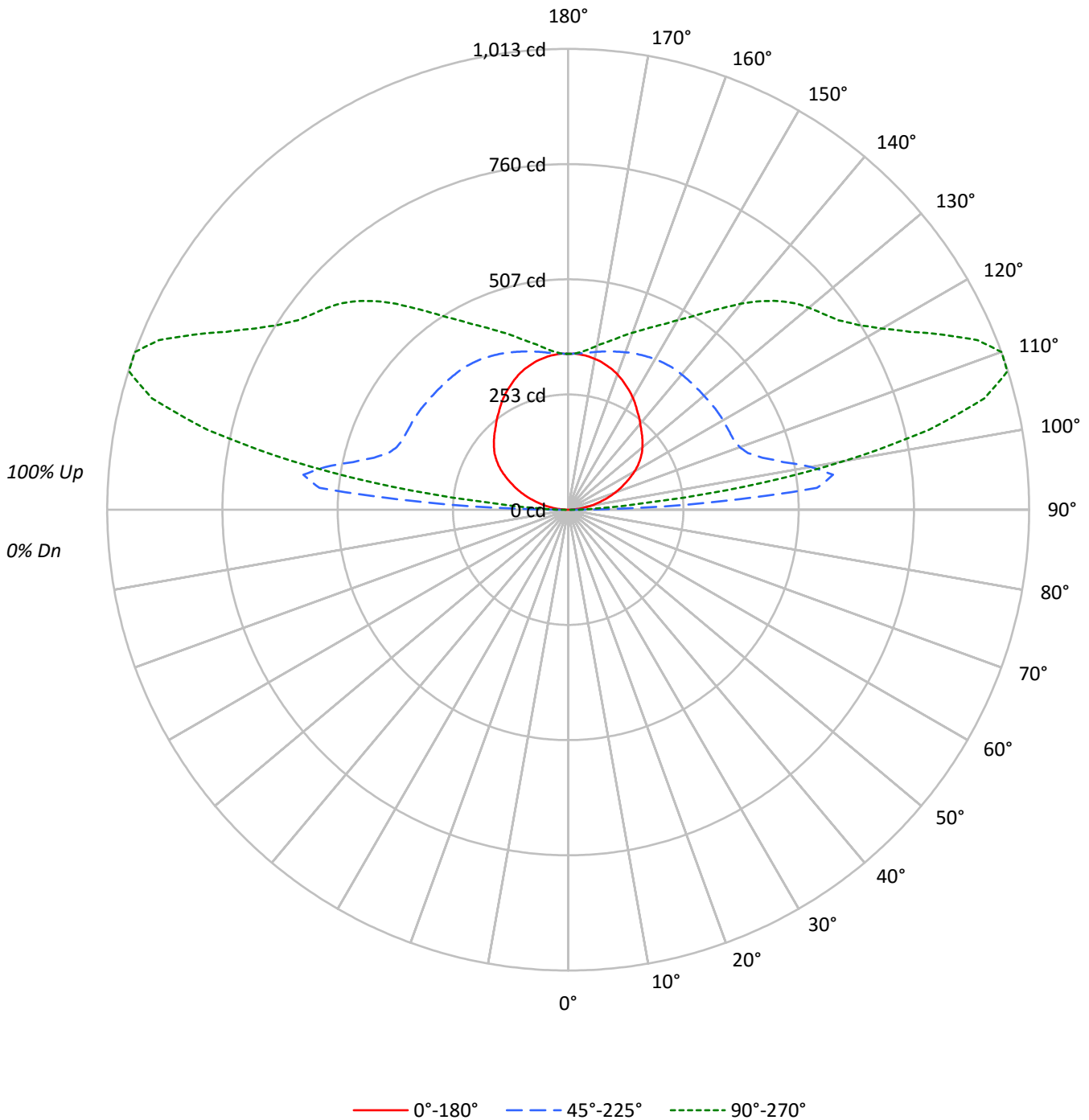
Lumens per Lamp: N/A
Luminaire Lumens: 2497.1 lumens
Efficiency: N/A
Efficacy: 94.6 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Indirect

Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	95	95	95	95	81	81	81	81	56	56	56	32	32	32	10	10	10	0
1	87	83	79	76	74	71	68	65	48	47	45	28	27	26	9	9	8	0
2	79	72	66	62	67	62	57	53	42	40	37	24	23	22	8	7	7	0
3	72	63	56	51	61	54	49	44	37	34	31	21	20	18	7	6	6	0
4	65	56	48	43	56	48	42	37	33	29	26	19	17	16	6	6	5	0
5	60	49	42	36	51	42	36	32	29	25	22	17	15	13	5	5	4	0
6	55	44	36	31	47	38	32	27	26	22	19	15	13	11	5	4	4	0
7	50	39	32	27	43	34	28	23	23	19	17	14	11	10	4	4	3	0
8	47	35	28	23	40	30	24	20	21	17	14	12	10	9	4	3	3	0
9	43	32	25	20	37	27	22	18	19	15	13	11	9	8	4	3	3	0
10	40	29	22	18	34	25	19	16	17	14	11	10	8	7	3	3	2	0

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	0	0	0
5°	0	0	0
10°	0	0	0
15°	0	0	0
20°	0	0	0
25°	0	0	0
30°	0	0	0
35°	0	0	0
40°	0	0	0
45°	0	0	0
50°	0	0	0
55°	0	0	0
60°	0	0	0
65°	0	0	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	0.0	0.0
10°-20°	0.0	0.0
20°-30°	0.0	0.0
30°-40°	0.0	0.0
40°-50°	0.0	0.0
50°-60°	0.0	0.0
60°-70°	0.0	0.0
70°-80°	0.0	0.0
80°-90°	1.3	0.1
90°-100°	248.4	9.9
100°-110°	518.5	20.8
110°-120°	460.9	18.5
120°-130°	388.0	15.5
130°-140°	323.7	13.0
140°-150°	247.1	9.9
150°-160°	173.8	7.0
160°-170°	102.2	4.1
170°-180°	33.2	1.3
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	1.3	0.1
90°-120°	1227.8	49.2
90°-150°	2186.6	87.6
90°-180°	2496.0	100.0
0°-180°	2497.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	0	0	0	0	0	
5°	0	0	0	0	0	0
15°	0	0	0	0	0	0
25°	0	0	0	0	0	0
35°	0	0	0	0	0	0
45°	0	0	0	0	0	0
55°	0	0	0	0	0	0
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	1	5	12	14	14	1
95°	22	70	549	272	164	24
105°	79	114	442	951	947	84
115°	139	174	394	757	910	138
125°	193	230	392	644	726	172
135°	230	273	388	572	649	177
145°	265	303	386	482	530	166
155°	301	325	376	425	444	139
165°	328	338	360	381	387	93
175°	342	343	345	350	349	32
180°	343	343	343	343	343	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.7	2.0	4.0	4.7	5.4	5.4	9.4	9.4	10.8	12.1	11.4
92.5°	9.4	13.5	20.9	31.0	43.1	60.6	102.3	167.6	230.9	263.9	219.5
95°	22.2	24.2	31.0	39.7	55.9	84.2	142.7	253.1	414.0	548.7	564.2
97.5°	37.0	37.0	43.1	51.2	65.3	89.5	136.0	230.9	396.5	587.1	707.6
100°	51.2	51.2	55.9	64.0	76.7	98.3	138.0	214.1	351.4	541.3	713.6
102.5°	64.6	66.0	70.0	77.4	89.5	109.7	144.7	209.4	321.1	484.1	663.1
105°	78.8	80.8	84.2	92.2	104.4	123.9	156.2	212.1	306.3	441.6	599.9
107.5°	94.3	95.6	99.0	107.7	119.2	138.7	168.3	220.1	302.3	414.0	548.0
110°	109.7	111.1	114.5	122.5	134.6	152.8	182.4	229.6	303.6	401.2	511.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	124.5	125.9	129.9	137.3	149.5	167.6	195.9	239.7	307.7	395.2	490.1
115°	138.7	140.7	145.4	152.2	164.9	183.1	210.0	250.4	313.1	393.8	478.7
117.5°	153.5	155.5	159.6	167.0	179.1	197.9	223.5	261.2	318.4	393.2	472.6
120°	168.3	169.7	174.4	181.8	193.2	212.1	237.7	272.7	324.5	393.2	467.9
122.5°	181.8	183.1	187.8	194.6	207.4	225.5	251.1	283.4	330.6	392.5	462.5
125°	193.2	195.9	200.0	207.4	220.1	239.0	263.2	294.2	336.6	391.8	456.5
127.5°	204.0	206.0	210.7	218.8	232.3	251.1	274.7	303.6	341.3	390.5	448.4
130°	212.7	215.4	220.8	230.9	243.7	263.2	286.1	312.4	346.7	389.8	441.0
132.5°	221.5	223.5	230.9	240.3	254.5	272.7	295.6	321.1	351.4	389.1	434.2
135°	229.6	232.3	239.0	250.4	264.6	282.1	304.3	328.5	356.1	388.5	427.5
137.5°	237.7	240.3	247.8	258.5	273.3	290.2	311.0	333.9	358.8	388.5	421.4
140°	246.4	248.4	255.8	267.3	281.4	297.6	317.8	339.3	362.2	387.8	416.7
142.5°	255.8	257.8	264.6	275.4	288.8	304.3	323.8	343.4	364.9	387.8	412.7
145°	264.6	266.6	273.3	282.8	295.6	310.4	327.9	346.0	365.6	386.4	408.0
147.5°	274.7	275.4	281.4	291.5	302.3	315.7	332.6	348.7	366.2	384.4	403.9
150°	284.1	284.8	290.2	298.2	308.3	321.1	335.9	350.8	366.2	382.4	399.2
152.5°	292.9	292.9	298.2	305.6	314.4	325.8	338.6	352.1	364.9	379.0	393.8
155°	300.9	301.6	305.6	312.4	319.8	329.9	341.3	352.8	363.5	375.7	388.5
157.5°	309.0	309.0	313.1	318.4	325.2	333.3	343.4	352.8	362.2	372.3	383.1
160°	316.4	316.4	319.1	323.8	329.2	336.6	344.7	352.8	360.2	368.3	377.0
162.5°	323.2	322.5	324.5	328.5	333.3	338.6	346.0	352.8	358.2	364.2	371.6
165°	327.9	327.9	329.2	332.6	335.9	340.0	346.0	351.4	355.5	360.2	365.6
167.5°	333.3	332.6	333.3	335.9	338.0	341.3	346.0	350.1	352.8	356.1	360.2
170°	336.6	335.9	336.6	338.6	340.0	342.0	345.4	348.7	350.1	352.1	354.8
172.5°	340.0	339.3	339.3	340.7	341.3	342.7	344.7	347.4	347.4	348.1	350.1
175°	342.0	341.3	341.3	342.0	342.7	342.7	344.0	346.0	345.4	345.4	346.7
177.5°	343.4	342.7	342.0	342.7	342.7	342.7	343.4	344.7	343.4	343.4	344.0
180°	342.7	342.7	342.7	342.7	342.7	342.7	342.7	342.7	342.7	342.7	342.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	12.1	12.8	13.5	13.5	14.1	14.8	14.1	14.1
92.5°	162.2	121.2	95.6	78.8	68.7	64.0	61.3	61.3
95°	498.9	394.5	304.3	239.0	206.0	185.1	173.0	164.3
97.5°	718.3	666.5	592.4	517.0	471.3	430.9	410.7	394.5
100°	811.9	825.4	792.4	742.6	684.0	642.9	622.7	617.4
102.5°	807.2	887.3	907.5	894.1	863.8	836.8	815.3	811.2
105°	754.0	870.5	937.1	964.7	966.1	960.7	951.3	947.2
107.5°	688.7	814.6	907.5	964.1	993.7	1005.8	1011.2	1011.9
110°	630.8	747.3	844.9	919.0	966.8	995.0	1007.2	1013.2



TEST NUMBER: P334817

CATALOG NUMBER: S124IP-S810U935-4F0-1E-UDD-4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	588.4	688.0	778.9	853.0	908.9	944.5	962.7	973.5
115°	562.8	645.6	724.4	789.0	842.2	882.6	904.2	909.5
117.5°	548.0	618.0	682.0	738.5	785.7	820.7	843.6	846.9
120°	538.6	601.2	655.1	702.9	741.2	770.9	788.4	795.8
122.5°	530.5	590.4	638.2	678.6	709.6	733.8	748.0	755.4
125°	521.1	579.0	625.4	662.5	689.4	708.9	721.7	725.7
127.5°	510.3	566.2	612.6	647.7	674.6	692.1	702.9	706.9
130°	496.8	550.0	595.8	631.5	659.1	675.9	686.7	690.7
132.5°	482.7	531.9	576.3	612.0	638.9	658.4	668.5	672.6
135°	469.9	513.7	554.7	588.4	615.3	634.2	645.0	649.0
137.5°	457.8	496.2	531.9	562.8	588.4	607.9	616.7	621.4
140°	447.7	479.3	509.6	537.9	561.5	576.3	585.7	591.1
142.5°	438.3	465.2	490.1	513.7	533.9	547.3	555.4	558.8
145°	429.5	452.4	472.6	491.5	508.3	519.7	526.5	529.8
147.5°	422.1	441.0	457.8	473.3	486.1	496.2	501.6	502.9
150°	415.4	430.9	444.3	456.5	467.2	476.0	480.0	480.7
152.5°	408.0	420.8	432.9	442.3	451.1	457.8	459.8	460.5
155°	400.6	411.3	421.4	429.5	436.3	441.6	443.7	443.7
157.5°	392.5	401.9	410.7	417.4	422.8	426.8	428.2	428.2
160°	385.1	392.5	399.9	405.3	409.3	413.4	414.0	414.0
162.5°	377.7	383.7	389.1	393.8	396.5	400.6	401.2	400.6
165°	371.0	375.0	379.7	383.1	385.8	388.5	387.8	387.1
167.5°	364.2	367.6	371.6	373.6	375.0	377.0	377.0	376.3
170°	358.2	360.2	362.9	364.9	366.2	366.9	366.2	366.2
172.5°	352.8	354.1	355.5	356.8	357.5	358.2	357.5	356.1
175°	348.1	348.7	350.1	350.1	350.1	351.4	350.1	348.7
177.5°	344.7	345.4	345.4	346.0	345.4	346.0	344.7	343.4
180°	342.7	342.7	342.7	342.7	342.7	342.7	342.7	342.7

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